DOCUMENT RESUME

ED 061 912 24 HE 003 036

AUTHOR DeVries, David L.
TITLE The Relationship of Role Expectations to Faculty Behavior.
INSTITUTION Johns Hopkins Univ., Baltimore, Md. Center for the Study of Social Organization of Schools.
SPONS AGENCY Office of Education (DHEW), Washington, D.C. Bureau of Research.
REPORT NO TR-72-33
BUREAU NO BR-0-0340
PUB DATE Feb 72
GRANT OEG-0-70-3347
NOTE 57p.

EDRS PRICE MF-$0.65 HC-$3.29
DESCRIPTORS Behavior Patterns; *College Teachers; *Faculty; *Higher Education; Professors; *Role Perception; Role Theory; Teacher Attitudes; *Teacher Behavior

ABSTRACT

This study examines the various sources of influences over 290 faculty members at a large public university. It was found that: (1) both the role expectations a faculty member has for himself and the role expectations of the employing organization predict positively and significantly the role behavior of the respondents; (2) the departmental colleagues' expectations predict significantly role behaviors for the research role only; (3) rank and the cosmopolitan-local dimensions are shown to be significant mediators of the conformity of the respondents to their colleagues expectations; and (4) the degree of person-role conflict a faculty member is exposed to is related to his productivity (research) but not to his satisfaction. The implications of the results are explored for role theory and for the understanding of faculty behavior. (Author/HS)

ORGANIZATIONAL RESEARCH
DEPARTMENT OF PSYCHOLOGY
UNIVERSITY OF WASHINGTON
SEATTLE, WASHINGTON

THE RELATIONSHIP OF ROLE EXPECTATIONS TO FACULTY BEHAVIOR

David L. DeVries

Center for Social Organization of Schools
The Johns Hopkins University
Baltimore, Maryland

Technical Report 72-33

February 1972

U. S. Office of Education, O. E. Bureau of Research
No. 0-0340, Grant No. OEG-0-70,3347

THE RELATIONSHIP OF ROLE EXPECTATIONS TO FACULTY BEHAVIOR[1]

David L. DeVries
Center for Social Organization of Schools
The Johns Hopkins University

ABSTRACT

The study examines sources of influence over 290 faculty members of a large public university. The role expectations a faculty member has for himself and the role expectations of the employing organization both predict positively and significantly the role behaviors of the respondents. The departmental colleagues' expectations predict significantly role behaviors for the research role only. Rank and the cosmopolitan-local dimension are shown to be significant mediators of the "conformity" of the respondents to their colleagues' expectations. In addition, the degree of person role conflict a faculty member is exposed to is related to his productivity (research) but not to his satisfaction. The implications of the results are explored for both role theory and for the understanding of faculty behavior.

---

[1]This study was sponsored in part by the Office of the Executive Vice President and Provost, University of Illinois, and the United States Office of Education (OEG-0-70-3347, principal investigator Fred E. Fiedler). The paper is based on a dissertation submitted by the author in partial fulfillment of the requirements for the Ph.D. degree at the University of Illinois. I am grateful for the invaluable direction of Fred E. Fiedler who acted as dissertation chairman. I am also indebted to Anthony Biglan, Donald Muse, Gerald Oncken, and Martin Zeigler, all of whom assisted in the project at various stages. John H. Hollifield and Carol DeVries provided rigorous editorial assistance.

INTRODUCTION

If organizations are to function effectively, it would seem necessary that they have control over the behavior of their employees (cf. Udy, 1965; Scott, 1965; Katz & Kahn, 1966). Consequently, organizations which employ large numbers of professionals - who value and obtain a great deal of freedom from organizational constraints - may be faced with a dilemma. This dilemma is particularly present when the individual professionals do not share the organization's operating goals.[1] This study addresses that dilemma by delineating various organizational, interpersonal, and personal sources of influence over professionals operating within an academic institution.

The literature on academic professionals suggests strongly that control over faculty is exercised primarily through interpersonal influence (cf. Parsons, 1956; Caplow & McGee, 1958; Abrahamson, 1967; Hill & French, 1966; Dykes, 1968).[2] Given that control over academicians appears to operate largely through values shared by the professional community, role

---

[1]The potential conflict between university and faculty goals has been examined by Wallis (1964) and Heimberger (1964). More recently another form of organizational conflict present in universities, namely between students and the university administration, has received considerable attention. For example, a recent issue of Daedalus (Spring 1970) dedicated to the issue of governance in Universities concentrated entirely on the student-administration conflict, with little, if any, attention centered on possible discrepancies between the goals of faculty and administration.

[2]Similar responsiveness to professionally based colleagial norms has been noted for scientists operating within industrial or governmental organizations (e.g., Marcson, 1960; Glaser, 1964; Radom, 1966). Even though such organizations have more control over their employees than do academic institutions, the professionals appear to be highly attuned to the shared values and expectations of professional colleagues.

theory is a particularly appropriate framework for describing such control. Sarbin & Allen (1969) note that ". . . role theory . . . bridges the gap between personal history and social organization " (p. 490). The dependent variable of interest to role theorists, namely role behavior, is embedded in a social, or interpersonal, context, with role behavior being largely a function of the role expectations (the central independent variable) of other relevant individuals.[1]

Role theory (cf. Sarbin & Allen, 1969, for most recent review) suggests three basic questions about the sources of influence on academicians and the processes through which such influence is exercised. These questions are: (1) Which persons or groups form a faculty member's role set? (2) Which variables mediate the responsiveness of academicians to the role expectations of one component of the role set, namely, departmental colleagues? (3) Do differences between what an academician does in his professional position and what he expects of himself result in psychological or behavioral disruption in the individual?

Answers to these three questions should contribute not only to an understanding of the behavior of faculty members but also to an assessment of the validity of several role theoretical assumptions. Of particular interest is whether they support the interpretation of role expectations - role behavior congruence as being a social conformity phenomenon. Questions

---

[1] Definitions of the following role theory constructs have been gleaned from Katz & Kahn (1966), Biddle & Thomas (1966), and Sarbin & Allen (1969). Role expectations: evaluative standards applied to the behavior of an occupant of an organizational position. Role set: the members of an organization with whom an individual is directly associated. Role behavior: the recurring actions of an individual occupying an organizational position. Role: the set of activities or expected behaviors associated with a given position. Role conflict: the simultaneous occurrence of two(or more)role sendings such that compliance with one would make more difficult compliance with the other.

(2) and (3) are particularly relevant in assessing the legitimacy of the social conformity hypothesis. Elaboration of these three questions follows.

(1) Which Persons Form a Faculty Member's Role Set?

A basic assumption made by role theorists is that an individual, in performing his various roles, is highly attuned to the actual and/or perceived reactions of a subset of other individuals in his environment. This particular subset of others (the role set) has more or less definite expectations concerning what the individual should do. The role set also possesses reinforcements and/or sanctions, the dispensing of which are contingent on the individual's behavior. A number of empirical studies suggest that individuals in organizations are responsive to the role expectations of others in the organization, such as their immediate superiors or peers.[1]

To which groups or individuals are faculty members responsive? The departmental colleagues are frequently cited as being important forces of control over a faculty member (cf. Parsons, 1956; Caplow & McGee, 1958; Clark, 1963). The departmental colleagues are, of course, a sample of the total set of professional colleagues. The receptivity of faculty members,

---

[1]The responsiveness of individuals to the expectations of others in their environment has long been of interest to social scientists. Beginning with Cooley's (1902) concept of the "looking glass" self, how an individual thinks of himself and behaves has been viewed as largely a function of the opinions that others have of him. Several studies of organizations (cf. Gross, Mason & McEachern, 1958; Katz & Kahn, 1966; Berlew & Hall, 1966; Korman, 1971) provide some support for the contention that an individual's behavior is influenced by the expectations of both organizational superiors and peers. The effect of the expectations of both teachers (cf. Rosenthal & Jacobson, 1968; Michenbaum, Bowers, & Ross, 1969) and peers (cf. Boocock, 1966, for review) on the academic performance of children has received particularly extensive coverage in the educational literature.

particularly those in prestigious universities, to the values shared by the profession-at-large is a theme found often in treatises on academicians (e.g., Gouldner, 1957, 1958; Cottrell & Sheldon, 1966; Newman, et al., 1971). Although the expectations emanating from departmental colleagues may be distinct from those emanating from the profession-at-large, only the expectations of departmental colleagues are measured in this study.

A second possible force in a faculty member's role set is the formal organization by which he is employed, that is, the university or college. The university may convey formalized expectations (e.g., minimum number of hours in class)which place restrictions on a faculty member's distribution of effort across his various roles.

A third possible component of a faculty member's role set is his immediate superior, the departmental executive officer. Caplow & McGee (1958), and Dykes (1968), among others suggest that faculty confer with their departmental executive officer about most administrative problems. It is possible that the departmental executive officer, being a professional colleague, might have a unique combination of coercive, reward, and expert power (cf. Raven 1965) to bring to bear on his influence attempts.

A fourth possible source of expectations is the faculty member himself. As noted by Sarbin & Allen (1969), the individual's self-image, consisting of a hierarchy of values, may provide an independent source of influence. Clark (1963), Anderson (1963), and Newman, et al. (1971), characterize faculty members as highly autonomous and highly responsive to the professional values they hold. These values are typically acquired in graduate school (Vollmer & Mills, 1966) and are an important causal force on their subsequent professional behavior.

Hypothesis I: The faculty member's role set consists of his departmental colleagues, his departmental executive officer, the university or college by which he is employed, and his own values. Consequently, the more role behavior expected of him by any of these components, the more he engages in such role behavior.[1]

(2) Which Variables Mediate Conformity to Colleagial Expectations?

Through what interpersonal processes do the role expectations of the various components of the role set influence a faculty member's behavior? Both Sarbin & Allen (1969) and Katz & Kahn (1966) treat the role episode as operating through the dynamics of social conformity.[2] Such role theorists feel the role episode involves the communication (both interpersonal and intrapersonal) of a set of normative beliefs. A variety of reinforcements, social and otherwise, hinge on conforming to the desired behaviors specified by the normative beliefs.

In order to assess whether the role episode operates as a social conformity process, several mediating variables have been included which are likely to affect the level of congruence between a faculty member's behavior and the self-expectations of his departmental colleagues. The social conformity literature (cf. Blake & Mouton, 1961; Allen, 1965; Collins & Raven, 1969; for reviews) suggests several mediating variables

---

[1] Expectations of a faculty member's students (particularly graduate students) may be a fifth important force on his role behavior. As documented in the report of a recent task force on higher education (Newman, et al., 1971), attempts have been made recently in various universities to make faculty members even more responsive to the students' expectations. The influence of student expectations may, however, be limited to the teaching role.

[2] The role episode, as defined by Katz & Kahn (1966), contains four elements (expectation, sent expectation, received expectation, and role behavior) with a causal sequence flowing from the first to the fourth elements. The role episode is also cyclical, with feedback loops (e.g. from role behavior to expectation) at various points in the sequence.

at the individual and organizational levels. These are the cosmopolitan-local orientation, status, and departmental size.[1] These are only a sampling of possible mediators, but they should provide some clear answers to the question of what interpersonal processes are involved in the role episode.

Cosmopolitan-Local: The individual-level variable which has received the most attention in the literature on professionals is cosmopolitan-local, introduced by Merton (1957), and tested empirically by, among others, Gouldner (1957, 1958), Bennis (1958), and Glaser (1964). Gouldner found two orientations among faculty, cosmopolitan and local, which proved to be salient predictors of faculty attitudes and behaviors. A "cosmopolitan" faculty member has low loyalty to his employing organization, high commitment to professional skills, and an "outer" (outside the organization) reference group orientation. The "local" faculty member has high loyalty to his employing organization, low commitment to professional skills, and an "inner" reference group orientation. Both Merton (1957) and Gouldner (1957) suggest that a cosmopolitan is less responsive to his departmental colleagues' expectations.

> Hypothesis II: "Cosmopolitan" faculty members conform less to the expectations of departmental colleagues than do "locals."

Status: As Allen (1965) has noted, a number of social conformity studies have found that group members of either high or low status conform less to group norms than do those of medium status. Among academicians, the high status individuals who have made impressive contributions to either

---

[1] Cosmopolitan-local is felt to be an important personality dimension in that it differentiates faculty with respect to their professional values. Although other personality dimensions such as authoritarianism or open-mindedness have received considerably more attention in prior social conformity studies, faculty members are likely to be highly homogeneous on such personality dimensions, particularly as they are presently measured.

the profession-at-large or to the specific department are typically greater freedom. Such freedom is formalized, to some degree, by the granting of tenure. Hollander (1967) has termed such tolerance of deviation from group norms for high status individuals as "idiosyncracy credit."

The low-status faculty, e.g., assistant professors, might be more likely to deviate from colleagial expectations for at least two reasons. In attempting to establish national reputations, assistant professors may be much more responsive to the demands of their profession-at-large than to their specific employing department. In addition, assistant professors might view themselves as marginal members of the department, with strong ties to such extra-departmental groups as students. Hanson's (1962) study of the role expectations of hospital staff suggests how such identification with other groups in the university might influence role behavior. Hanson found that individuals whose positions are linked to other organizational subsystems view their role differently from those role occupants who are more centrally located.

Hypothesis III: Both high and low status faculty members conform less to colleagial expectations than do faculty of medium status.

Departmental Size: A number of studies have examined the influence of group size on conformity to group pressures. Allen (1965), in his review, suggests that very small and very large groups elicit the least amount of conformity. Although little evidence on the relationship between size and conformity is available from role theoretical studies, Gross, Mason & McEachern (1958) did treat organizational size. They found less consensus about the role of school superintendent in larger school systems. As Sarbin & Allen (1969) note, such lack of role consensus is likely to result in less conformity.

Although Allen indicates a curvilinear relationship between group size and conformity, it is important to fix the size on an absolute scale. Blake & Mouton's (1961) review is useful for such an estimation. They conclude that a four member group may be the most effective in inducing member conformity. Since the smallest department included in this study consists of ten members, an inverse relation is predicted between departmental size and conformity.

Hypothesis IV: The larger the department, the less conformity there is to expectations of departmental colleagues.

In short, Hypotheses II through IV represent three critical tests of the social conformity conceptualization of the role episode. The tests for these three hypotheses should assist in determining whether behavioral conformity is occurring or whether the expectations-behavior congruence merely reflects behavioral uniformity. Allen (1965) notes that behavioral uniformity is often mistaken for behavioral conformity. Conformity is defined as behavior influenced by a group that results in increased congruence between the individual and the group. Behavioral uniformity, in contrast, is due to individuals in a group responding independently to the same stimuli in the absence of group pressure. For example, similar faculty expectations could be due to the selective hiring policies of the department, in which only individuals who value research might be hired. In this case similarity of expectations is not due to a social influence process. Thus behavioral uniformity exists as a plausible alternative explanation of role expectation-role behavior congruence.

(3) What are the Effects of Person-Role Conflict?

As noted earlier, role theory provides a way of conceptualizing the interplay between organizational and individual forces. At the heart of

this interaction is the concept of person-role conflict (Katz & Kahn, 1966), or self-role congruence (Sarbin & Allen, 1969). Both person-role conflict and self-role congruence are defined similarly and refer to the amount of agreement between the role requirements of an individual and his expectations, values or capacities. If, as a part of his role, an individual is required to engage in activities he feels are illegitimate, unimportant, or inappropriate, he is said to have person-role conflict. An example of person-role conflict for a faculty member would be an individual who is required to teach three undergraduate courses each semester, but who feels teaching is of little value and is unrewarding.

The question of the psychological effects of person-role conflict is an important one for role theory. If the individual's self is more than a collection of roles he is required to perform (as suggested by Levy, 1970), then conflict between the self and the role requirements should result in psychological conflict, as predicted by most role theorists (e.g., Biddle & Thomas, 1966; Katz & Kahn, 1966; Sarbin & Allen, 1969).

Several empirical studies of person-role conflict (cf. Smelser, 1961; Borgatta, 1961; Bunker, 1967) suggest that individuals perform more efficiently in self-role congruent situations because they experience less emotional tension and cognitive strain.[1] The concept of person-role conflict appears particularly salient to faculty members. Based on an

---

[1] Cognitive dissonance theorists in the attitude change literature (cf. Festinger, 1957) have treated a phenomenon comparable to person-role conflict, namely the forced compliance situation. In such a situation an individual is "forced" to engage in a behavior which is discrepant from a belief which he has internalized. This behavior-value discrepancy is hypothesized to result in a dissonant cognitive state which the individual experiences as uncomfortable. The cognitive dissonance theorists have examined the alternative modes of dissonance reduction, and these may be of relevance to person-role conflict, as conceptualized by role theorists.

extensive study of faculty members, Gross (1968) indicates that faculty feel that a university's number one goal should be maintaining their academic freedom. That is, a university should provide a setting in which a faculty member's role behaviors reflect his own values and expectations. Faculty members are undoubtedly a unique occupational group in their level of demand for, and attainment of, such person-role congruence. Such matching of behavior and values appears to be an important feature of academic life, a feature on which hinges such factors as faculty satisfaction and turnover rates.

Hypothesis V: The more person-role conflict a faculty member experiences, the less satisfied and productive he is.

METHOD

Sample

The faculty members in the study were employed by the University of Illinois (Champaign-Urbana campus). The 290 participants are a subset of the faculty members who responded to a mailed questionnaire. From departments with a 45% or greater return rate, faculty were selected who had been employed by the University of Illinois for four or more years.[1]

The 290 participants represent 34 academic departments. Fifty-five percent are employed in the physical and biological sciences, 23% in social science and business disciplines, and 22% in the humanities. Fifty percent of the respondents are full professors, 24% are associate professors,

[1]The four or more years criterion was used for these two reasons: The role episode is viewed as an interpersonal process phenomenon. For such influence to operate, an individual must be a member of the department for some time. In addition, in order to obtain a fairly reliable measure of research productivity, the performance of the participants was measured over the prior four years.

and 26% are assistant professors. Ninety-three percent of the respondents are males, and 83% have obtained either a Ph.D. or Ed.D. Of the respondents, 78% published one or more articles in professional journals during the preceding four years, with the average faculty member publishing 5.3 articles during that time.

Data Sources

Over the space of an academic year, data were collected using both mailed questionnaires and administrative data files. This use of multiple data sources allows one to deal at least partially with the method variance inherent in any given measure.

Faculty Questionnaire

The prime source of role expectations data is the questionnaire mailed out to the faculty members. Prior to the present study a pilot questionnaire containing many items similar to those on the present questionnaire was administered to faculty from four diverse departments. The reliability and validity of the items on the pilot questionnaire were assessed and utilized in constructing the questionnaire used in the study. Departmental return rates for the questionnaire used in the study varied from 23% to 100%,with the median being 58%.[1] The questionnaire provided data for the following variables:

---

[1]Tests were conducted comparing respondents with nonrespondents on 13 different organizational expectation variables (obtained from the University Bureau of Institutional Research). The operational definitions of such variables are specified later in this section. Of the 13 different variables, respondents differed significantly ($p < .05$; use of t-tests) from nonrespondents on the following: Full Time Equivalent (FTE) university administration; FTE departmental research; FTE organized research; FTE thesis research, and FTE extension. Although respondents had significantly greater FTE for research and administration, no differences were noted for teaching and other, more peripheral, task areas.

Role Expectations

Focal Person's Expectations: the importance assigned to the role, or task by the faculty member. The respondent distributed 100 points across five roles, three of which are used in the study: teaching and training; research and scholarly work; and departmental and university administration.

Colleagues' Self Expectations: the average importance assigned to a role by all other respondents from the focal person's department.

Executive Officer's Self Expectations: the importance the executive officer, speaking for himself, assigned to a role. Executive officers include both departmental heads and chairmen.

Role Behavior

Proportion Time: the percent of time the respondent reports spending, during the academic year, on each role. The respondent distributed 100 percentage points across five roles.

Number of Hours: the percent of time reported spent on a role multiplied by the number of hours reported spent on all professional activities for an average week.

Role Conflict

Conformity with Colleagial Expectations: the respondents' Colleagues' Self Expectations score for a role minus the Proportion Time he reports spending on the task.

Person-Role Conflict: the importance assigned by the respondent to a role minus the proportion of time he spends on it.

Satisfaction

seven item satisfaction scale was also administered. Each item contained an eight-point, bi-polar response scale, with the end points being "Very satisfied" and "Not at all satisfied." A principal axis factor analysis (with Varimax rotation) conducted on the scale revealed the following three factors:

Satisfaction With Departmental Functions: sum of satisfaction with departmental organization of teaching, research, and administration. The level of internal consistency for this three item factor is high, as indicated by a coefficient alpha = .76.

Satisfaction With Personal Achievement: sum of satisfaction with progress toward own goals, with present position, and with present job in light of career expectations. A coefficient alpha of .91 reveals a high level of internal consistency in the responses across the three items which make up this factor.

Satisfaction With Personal Relations: satisfaction with personal relationships with colleagues.

Role Conflict Mediators

Cosmopolitan-Local: measured by two of several behavioral measures suggested by Bennis, et al. (1958). A cosmopolitan identity is an above-the-median score on number of professional positions held outside the university, and a below-the-median score on number of administrative positions held in the university. A local identity is a below-the-median number of professional positions outside the university, and an above-the-median number of administrative positions in the university.

Status: the faculty member's formal rank: assistant, associate, or full professor.[1]

Administrative Data Files

The second source of data for the study is the administrative data files of the University. The University's Bureau of Institutional Research collects data on its faculty, and it is from these data that organizational expectations are defined. The Organizational Expectations are the Full Time Equivalent (FTE) estimates assigned to the faculty member for teaching, research, and administration. FTE is an assignment (by the executive officer) of the amount of effort each faculty member is expected to expend on each task. FTE is thus felt to represent expectations of the university administration and others.

FTE is calculated each semester by the University. The University's data bureau asks each departmental executive officer to file a report in which he distributes the effort of each of his faculty members across several tasks. The executive officer may consult with the faculty member in determining the distribution of effort. Already listed by the University are the various sources from which the individual is being funded, as well

[1]Rank is a measure of formal status. It is possible that formal status is independent of informal status. Since informal status may be conceptually more relevant to the influence process, it is of value to know whether rank is related to several measures of interpersonal prestige or power. The resulting correlation coefficients (from analyses using all 290 participants) reveal significant positive relationships between rank and the following: amount of perceived autonomy over both teaching and research tasks; amount of perceived participation in departmental decision-making; and number as well as quality of journal articles published. Greater perceived influence and higher research productivity appears to accompany the higher rank levels.

as the percent of appointment accounted for by the particular funding source. The total FTE (percent of a full load) must equal the summed percentages across the funding sources and must be congruent with the nature of the sources. For example, if 50% of an individual's salary comes from a general teaching account, it would be inappropriate if 75% FTE (or 3/4 of the individual's effort) were assigned to research activities. Thus FTE provides an estimate (independent from the faculty member's own report) of expectations which have a potential impact on faculty behavior.

Publications of the Faculty

A booklet published annually by the University press is one source of data for faculty research productivity. The booklet presents data, collected by means of a questionnaire mailed to all University faculty, concerning the number of publications (in various media) emanating from the faculty. For this study, the relevant research productivity measure is the number of articles published in professional journals by each faculty member during the four years preceding the administration of the faculty questionnaire (Number of Articles score).

Quality of Journals Index

Two other measures of research productivity are derived from a questionnaire assessing the quality of journals in which the respondents published. A subsample of faculty from each department rated the quality (five-point scale from "excellent" to "poor") of all journals in which they and their departmental colleagues had published during the four preceding years. The median interrater reliability coefficient ($r = .48$) reveals acceptable agreement among the respondents. From these ratings an average quality score was calculated for each journal. Each faculty member was

then assigned a Quality of Journals score in the following manner. The average quality of journals score was assigned to each article he published during the four preceding years, and these scores were summed to obtain a final score.

A third conceptually distinct measure of research productivity accounts for articles in which authorship is shared. The booklet published by the University not only lists the articles published by a faculty member, but also whether others shared in the authorship. To account for possible differences in level of effort expended on the articles, the quality score attached to each journal article published by a faculty member was divided by the number of authors listed for the article. These quotients were summed to form a Quality of Journals/# Authors score

RESULTS AND DISCUSSION

Behavior in three distinct roles - teaching, research, and administration - are measured for each of the participants. Consequently, analyses which test the hypotheses are conducted separately for each of the three roles. It is possible that the influence processes surrounding each of the three roles are quite distinct.

Preliminary Analyses

One of the three structural dimensions of role behavior cited by Sarbin & Allen (1969), namely, preemptiveness, is of interest. Preemptiveness of a role is simply the amount of time an individual spends in one role, relative to the time he spends in his other roles. If the amount of time a faculty

member spends on a role results from his own choice, the amount of time spent may reflect the importance of the role for him. The mean percent of effort reportedly expended by the participants on each of the three task areas is as follows: teaching = 44%, research = 29%, and administration = 12%. The remaining 15% of faculty effort is divided among the "Service" and "Other" task areas.

It appears then that both the teaching and research roles are highly preemptive for the average respondent. The administrative role is, in contrast, quite peripheral, consuming less than one out of eight of his working hours. Although Sarbin & Allen fail to suggest this, the level of preemptiveness of a role might moderate the effect of the role expectations emanating from the role set. For example, a faculty member might ignore the expectations of his colleagues concerning the level of effort he expends on administrative activities, but be highly responsive to their demands for the research domain. The question of whether the preemptiveness of a role influences the role episode is treated subsequently in the paper.

1. Which Persons Form a Faculty Member's Role Set?

In order to test Hypothesis I, zero-order correlation coefficients were computed between each of the four postulated components of the role set and the two measures of role behavior (Proportion Time and Number of Hours). The four role set components are: FTE - organizational expectations; COLLEAGUES - the average self-expectation of departmental colleagues; SELF - the focal person's expectations; and EXECUTIVE OFFICER - the self-expectations of the individual's departmental head or chairman. To assess the predictive power of the total set of expectations, multiple regressions were computed, with the expectation variables as the predictors and the measures of role behavior being the criterion variables.

Table 1

Table 1 contains the zero order correlation coefficients between each of the expectation forces and each of several measures of role behaviors. In addition, the bottom row of Table 1 contains the R^2, or percent of variance accounted for by the multiple regression of all four expectation forces on the role behavior measures. As the R^2 values reveal, the linear combination of the four role set components results in a powerful predictive force, accounting for from 37 to 58% of the variance of role behaviors. If a faculty member's role set is defined by these four normative forces, the role set may become a powerful source of reference. There is some difference in predictive power across task areas, with the administrative role behaviors being least predictable. This may complement the earlier finding of low preemptiveness for the administrative role. A person's behavior in the peripheral roles which he plays may be less responsive to the expectations emanating from his role set and more responsive to other structural or random factors.

Also of interest in Table 1 is the level of predictive power for each of the four expectation components:

Organizational Expectations (FTE): Table 1 reveals strong positive relationships between FTE level and role behavior for all three task areas and for both sets of role behavior measures. The correlations range from .48 to .56, and are all statistically significant ($p < .01$). The results support the contention of Anderson (1963) and Clark (1963) that influence over faculty may operate through certain bureaucratic requirements imposed by the university.

It should be noted that a faculty member can potentially influence the FTE level assigned to him. For example, if a faculty member wanted to spend

Table 1

Zero Order Correlations Between Amount of Role Behavior

And Expectations of Role Set

EXPECTATIONS	ROLE BEHAVIORS					
	PROPORTION TIME			NUMBER HOURS		
	Teach.	Res.	Admin.	Teach.	Res.	Admin.
FTE	.49 **	.56 **	.51 **	.50 **	.51 **	.48 **
COLLEAGUES	.42 **	.34 **	.01	.37 **	.35 **	.03
SELF (Focal Person)	.67 **	.68 **	.55 **	.54 **	.57 **	.52 **
EXECUTIVE OFFICER	.07	-.03	-.11	.09	.00	-.13 *
R^2	.54 **	.58 **	.41 **	.41 **	.53 **	.37 **

Note: Each correlation coefficient is based on an N = 290

*p < .05

**p < .01

more time on research he might apply for an independent research grant which, if applied to his salary, would result in an increase in his research FTE. Nevertheless, the results do suggest that FTE assignments prevent gross deviation in role performance , such as a faculty member teaching no courses but having assigned to him a 100% teaching FTE. The expectations emanating from organizations, particularly when the employees are professionals, may merely serve the function of setting loose upper and lower limits on the role performance.

Colleagial Self-Expectations: Table 1 also contains the correlations between self-expectations of departmental colleagues and role behavior. The correlation coefficients are positive and statistically significant for the teaching and research roles (range from .34 to .42). No significant relationships are observed for the administrative role.

The observed significant relationships between colleagial self-expectations and role behavior for the teaching and research roles reinforce the concept of strong professional norms, a concept which has appeared repeatedly in the literature on professionals (cf. Caplow & McGee, 1958; Gouldner, 1958; Martin, 1969; Newman, et al.1971). Even though a faculty member may not interact frequently with many of his departmental colleagues (particularly in the large departments which consist of up to 100 staff members), their expectations appear to be conveyed to him and, to some degree, to influence his behavior. It is possible of course that the expectations emanating from the colleagues may overlap with those being sent from some other source, for example, the organization.

The lack of predictive power for the administrative role is an interesting contrast to the strong predictive relationship observed for teaching and

research. It is strange that the least amount of predictive power exists for the role in which the compliance to colleagial expectations is most visible. Sarbin & Allen (1969) note that visibility of role performance is important in completing the role episode. Administrative work, particularly at the departmental level, is highly visible. In fact, departmental faculty meetings are unique in that they represent one of the few times in which faculty members can observe each other.

The lack of preemptiveness of the administrative role is a possible explanation of the insignificant predictive power for colleagial expectations. The expectations of colleagues may be communicated and be accompanied by an array of reinforcements only for the roles which are perceived as central to the overall professional role. In the case of the participants, it appears to be the teaching and research roles which are valued highly and on which a great deal of effort is expended. If comparable data were collected from a sample of faculty from community colleges, for example, colleagial expectations might predict only the teaching role, since academicians in such settings typically do not preceive research as being central to their professional identity (Cohen, et al., 1971).

Self (Focal Person) Expectations: As might be expected, the faculty member's own expectations or values are strong and positive predictors of his role behavior. Table 1 reveals statistically significant correlations (range from .52 to .68) across the three roles for both sets of role behavior measures. There is only a slight difference across task areas in the strength of the relationships, with administrative behavior predicted least well.

The data support the contention of Parsons (1956), Clark (1963), and others, that faculty members experience a great deal of personal autonomy in their professional role. It appears that how a faculty member divides his effort across several roles follows strongly from the relative amount of value he places on the several roles.[1]

The data suggest that a faculty member's values or self-expectations determine to an impressive degree his distribution of effort across roles. However, it is still unclear whether the faculty member's self expectations are independent from those of his colleagues or of his organization. A faculty member may merely internalize the role expectations emanating from his colleagues or his employing organization. If this is true, the self expectations do not represent an independent causal force on the faculty member's role behavior. This question is examined subsequently in the paper.

A second alternative perspective of the predictive power of self expectations comes from the experimental work of Bem (1965, 1966, 1967). Bem, working within a strict Skinnerian framework, suggests that values are self-descriptive statements based on an individual's observations of his own overt behavior and the external stimulus condition in which it functions. That is, if a faculty member over a period of time expends considerable effort on research without obviously being forced to do so, he is likely to infer from his

---

[1]The data also support directly the findings of several earlier studies on professionals which noted a strong relationship between the personal value structures of professionals and their professional role behavior (Mukherjee, 1968; Chaney, 1966; Friedlander & Margulies, 1969; Vollmer & Mills, 1966).

behavior that he must value doing research. In short, Bem contends that a person's attitudes, values, or self-expectations follow from his behavior as much as they precede it.

Bem provides an important challenge to the long-standing notion of the permanence of a person's value set. Although Bem may be right, there exists some evidence (cf. Gross, 1968; Vollmer & Mills, 1966; Crane, 1965) that the values or self-expectations of faculty members are formed in graduate school (which is often an intense socialization experience) and persist throughout a professional's career. That is, professional values are embedded in a graduate student, and these values are quite impervious to whatever subsequent work experiences he might have. However, in light of the minimal empirical basis for such contentions, Bem's conceptualization of values, particular for professionals, remains as a formidable alternative explanation.

Executive Officer's Self Expectations: The most striking feature of the relationship (Table 1) between executive officer self expectations and the focal person's role behaviors is the nonsignificance across all task areas. The results do not support the hypothesis suggested by role theorists (e.g., Sarbin & Allen, 1969) that the expectations of organizational superiors influence directly the behavior of their subordinates. However, a caveat concerning the operational definition of executive officer expectations is required. The executive officer's self expectations reflect the amount of importance he places for himself on each of the several task areas, not the amount of effort he expects a given member of his department to place on the task area. Keeping this caveat in mind, the results probably reflect a vastly different task or role structure applied to the departmental head or

chairman positions. Although the role structures of most faculty are likely to be very similar, the role structure of the departmental executive officer is an exception. Consequently, the executive officer may assign different levels of importance to the several role behaviors than do his colleagues.

Thus the results in Table 1 do not necessarily imply little systematic influence by the departmental executive officer over the behavior of his faculty members. It might be that the executive officer has strong informal influence over his colleagues, even though he defines his own role structure quite uniquely. To test this possibility, the faculty member's response to an item which asked him to list those colleagues with whom he likes to work was used as a measure of informal influence. The question was asked separately for administration, research, and teaching. For the administrative task area 55% of the respondents chose the departmental executive officer. However, for the teaching (12%) and research (5%) task areas the departmental executive officer was seldom chosen. In short, the executive officer was seen as a preferred coworker only for administrative tasks.

His desirability as a partner in research and teaching activities appears minimal. These results reinforce the findings in Table 1 and suggest that the departmental executive officer not only has a set of professional expectations quite unique from his colleagues but also has little informal influence over his colleagues, except for administrative activities. It is possible that the departmental executive officer, because of his idosyncratic role expectations, has become a marginal member of his professional community. Not only does the executive officer frequently have little formal authority over his faculty, but in addition, by the nature of the role allocations required of him he may lose whatever informal influence he had originally with his colleagues.

Strength of Role Set Components: An additional test of Hypothesis I asks what level of explanatory or predictive power each of the four role set components has after the explanatory power attributable to the other three forces is removed. In order to answer this question, a form of regression analysis is used that portions the variance in the criterion variable accounted for by the predictors into two categories: unique variance (variance which a particular independent variable, and only that variable, can predict), and common variance (variance that can be explained only if a certain combination of two or more variables is present). Thus, by using this technique, it is possible to address the relative predictive strength of the independent variables.[1]

Table 2 contains the percent of explained variance analyses for the three role behaviors - teaching, research and administration. Each column contains the breakdown of total variance explained (cf. the R^2 values in Table 1) into its component parts. The variance is divided into "unique" and "common." Table 2 reveals that between 52 and 61% of the total variance accounted for by all four components of the role set is explainable by the unique forces of these four predictors.[2] This stands in contrast to other studies of behavior in academic settings (cf. Mayeske, 1970) in which only

[1]A technical discussion of this technique can be found in Wisler (1968). In general, this technique uses conservative parameter estimation procedures in that all variation explainable by alternative variables is removed in estimates of both unique and common variation estimates. Mood (1971) has examined the potential uses of the analysis for educational research.

[2]This total is arrived at by summing across the four "unique" scores for each dependent variable. The total is listed in Table 2 in the row entitled "Sum Unique."

20 to 30% of the explained variance is unique. This relatively high proportion of unique variance is of interest in that it suggests an independence of effects for the various components of the role set. The several expectation components appear to act as complementary forces. This raises the question of whether a group is more likely to become an important force in the focal person's role set if they "send" expectations which are nonredundant with other, already established components of the set.

Table 2

An examination of the percent of explained variance for each of the four role set components is of value. As Table 2 reveals, FTE maintains its position (noted orginally in Table 1) as a strong unique predictor of role behavior. The organizational expectations predict best the administrative role. This result may complement the trend observed in Table 1 in which the overall predictive power of the total role set is least for the administrative role. Perhaps for roles low in preemptiveness which a faculty member engages in, the more formal, bureaucratic requirements play a more central causal role.

Although colleagial values correlate significantly with role behaviors in Table 1, their "unique" explanatory power is nonexistent (cf. Table 2). However, colleagial values contribute a significant amount to the "common" or shared variance for the teaching and research roles.[1] For example, of the total variation explained by the four expectation variables, 19% (for proportion time) and 21% (number hours) is explained by the colleagial expectations - self expectations pair. This finding is not unexpected. It

[1]The breakdown of the "common" variance into its several components is not included in table 2.

Table 2

Percent of Explained Variance Analysis for Role Behaviors by Expectations of Role Set

EXPECTATIONS (Independent Variables)	ROLE BEHAVIORS (Dependent Variables)					
	Proportion Time			Number of Hours		
	Teach.	Research	Admin	Teach.	Research	Admin.
UNIQUE						
FTE	9%	16%	23%	19%	12%	23%
COLLEAGUES	3	1	0	3	2	0
SELF	43	36	35	30	39	34
EXECUTIVE OFFICER	0	1	3	0	0	4
SUM UNIQUE	55	54	61	52	53	61
COMMON - SUM	45	46	39	48	47	39
TOTAL	100%	100%	100%	100%	100%	100%

merely suggests that if the values of a faculty member's departmental colleagues are to coincide with his role behavior, they must first coincide with his own values. That is, there must be an internalization of the values shared by a faculty member's colleagues before his role behavior coincides with their expectations.

The relatively large "common" variance explained by the colleagial expectations - self expectations pair for research behavior does not hold up as well for teaching. For the teaching role behavior .5% (proportion time) and 9% (number of hours) of the total explained variance is common to these two expectation forces. Why should the "common" variance be less for teaching? It may be that colleagial expectations are perceived as more relevant to the research role. As a result the colleagial expectations are internalized more for research than for teaching. This could be due to colleagues applying reinforcement contingencies more frequently and applying more valued reinforcements to research than to teaching behavior. It could also be due to greater visibility of the outputs from the research role. As noted by Sarbin & Allen (1969), visibility of the role behavior allows greater feedback to the role set, thus completing the role-episode.

Table 2 reinforces the prime and unique explanatory role of self expectations on role behaviors. The self expectations uniquely account for a large percentage (from 30 to 43%) of the total explained variance. As noted earlier, it also shares a relatively high percent of explained variance with colleagial expectations for the research role.

A final observation on the explanatory power of self expectations concerns its relationship with FTE. Although they both have strong unique explanatory

power, the common variance explained by this pair is minimal (ranges from 3 to 8%). In other words, FTE and self expectations are truly unique predictors of faculty behavior.

In short, Hypothesis I is substantiated for three of the four postulated role set components. Organizational Expectations (FTE), colleagial self expectations, and the faculty member's own expectations are significant predictors of his role behavior. Of these three, FTE and self-expectations have a unique predictive power, independent of the other components. The self-expectations of colleagues, in contrast, share their influence with the faculty member's own expectations, particularly for the research role.

2. Which Variables Mediate Conformity to Colleagial Expectations?

Tests for Hypothesis II through IV are conducted in this section, examining the separate effects of cosmopolitan-local orientation, status, and departmental size on behavioral conformity to colleagial expectations. Behavioral conformity is defined both by a mere direction score (+ or -), and by a raw difference score which entails both direction and degree of deviation. The raw score measure of behavioral conformity is the most appropriate for the tests of the three hypotheses. The directional measure provides additional useful information, albeit somewhat peripheral to the actual hypothesis testing.

Cosmopolitan-Local: Hypothesis II proposes that cosmopolitans conform less to colleagial expectations than do locals. To test the hypothesis the participants were divided into four groups by breaking the sample at the median on two dimensions: number of administrative positions in the university and number of professional positions held outside the university. Of particular interest is the LoHi group which is termed "cosmopolitan"

and the HiLo group which is termed "local." The other two groups (LoLo and HiHi) are also included in the general analyses.

Table 3 contains the analyses relevant to the test of Hypothesis II. The table lists the means and standard deviations of the behavioral conformity scores for each of the three roles, with the participants grouped on the cosmo-local dimension. The mean scores indicate not only degree of behavioral deviation but also the direction, with positive scores indicating doing less than expected, and negative scores indicating doing more than expected. T-tests were conducted for differences between the "cosmopolitan" and "local" groups. The resulting t-ratios reveal a significant difference for the administrative role ($t = 5.58$; $df = 90$; $p < .01$). The t-test used takes into account the unequal variances for the two groups (Hays, 1963). The t-tests computed for teaching ($t = .22$; $df = 113$; n.s.) and research ($t = 1.29$; $df = 113$; n.s.) reveal no significant differences.

The difference in means for the administrative role is in the opposite direction of that predicted, that is, the "locals" deviate more from colleagial norms than the "cosmopolitans." The "locals" appear to spend a considerably larger portion of their time on the administrative role than what their colleagues expect, as is indicated by the "locals" negative mean conformity value ($\bar{X} = -11.4$).

Table 3

In light of the contradictory findings in Table 3, we might ask if the "locals" follow the pattern predicted by Gouldner (1957) of overinvesting in the administrative role and underinvesting in the research role. A

Table 3

Means, Standard Deviations and *t*-tests for Cosmo-Local on Behavioral Conformity to Each of Three Task Areas

	HiHi	LoHi (Cosmos)	HiLo (Locals)	LoLo
TEACHING				
Mean	6.35	.11	1.00	-5.04
	(89)	(56)	(59)	(85)
St. Dev.	19.65	21.26	21.79	22.33
		$t = .22$, $df = 113$, n.s.		
RESEARCH				
Mean	9.31	3.29	8.13	.36
	(89)	(56)	(59)	(85)
St. Dev.	19.36	20.90	18.84	24.95
		$t = 1.29$, $df = 113$, n.s.		
ADMINISTRATION				
Mean	-6.83	3.77	-11.4	1.53
	(89)	(56)	(59)	(85)
St. Dev.	15.45	9.33	18.39	11.01
		$t = 5.58$; $df = 90$; $p < .001$		

Note: ( ) = N

comparison of the direction of deviation scores provides additional information (to that in Table 3) relevant to answering this question. The participants are categorized as either doing more of a role than "expected" or doing less than "expected." For the "locals," 76% report doing more administration, while only 25% report doing more research. This is in contrast to the "cosmopolitans," of whom 43% report doing more administration, and 41% report doing more research. Chi-square tests for association were computed comparing the "locals" with the "cosmopolitans" for the research and administrative roles. A significant difference was obtained for the administrative role ($X^2 = 13.37$; $df = 1$; $p < .001$), but not the research role.[1]

In sum, the "locals" appear to be the greatest deviants from colleagial self-expectations, at least for the administrative role. Although they also deviate more for the research role, the difference is not statistically significant. Why are the individuals who are most involved in the department greater deviants from the departmental norms? In part because departments in a large, graduate-oriented university are likely to be cosmopolitan oriented, as evidenced from the great amount of effort expended by the average faculty member on research activities. This is in contrast to Gouldner's study (1957; 1958) in which the departments used were from a small, liberal-arts college. In such departments the "locals" may dominate the department, and set the normative or expectational climate. However,

---

[1] Incidentally, the group which comes closest to Gouldner's "cosmopolitan" type in their "investment pattern" is the LoLo group. Of these faculty, only 27% report doing more administration than their colleagues "expect," while 45% report doing more research and 61% report doing more teaching than expected. These are the individuals who are involved in no administrative or leadership role in either their local department, university or their profession-at-large.

in large, graduate-oriented universities the "cosmopolitans" may determine the normative climate.

Status and Department Size: Hypotheses III and IV are tested jointly because of a possible interaction effect. That is, faculty members at the different rank levels may be differentially responsive to colleagial self-expectations in small departments as compared with large departments. As was done in the prior section, analyses are conducted of both sign and degree of deviation scores of behavioral conformity.

Hypotheses III and IV are tested by a series of two-way analyses of variance. The first factor is rank, with three levels: assistant, associate, and full professor. The second factor, department size, also has three levels: small (departments with between 10 and 20 faculty members), medium (from 21 to 35 members) and large (from 36 to 125 members). Separate analyses were conducted for the three role behaviors. The hypotheses predict main effects for both department size and rank.

Table ontains the F ratios obtained from the two-way ANOVAs. Although no significant main effects were obtained for the teaching role, a significant interaction effect was obtained ($F = 3.14$; $df = 4,281$; $p < .05$). In examining the means of the Rank by Dep't Size cells, the interaction appears due to a strong difference in both degree and direction of deviation from colleagial self expectations for faculty in small departments ($\bar{X}$ for Assistant = -13.4; $\bar{X}$ for Associate = +10.2; $\bar{X}$ for Full = -5.2). More specifically, the assistant and full professors in small departments appear to be doing more teaching than expected, whereas the associate professors engage in considerably less teaching than expected. No differences across rank

were noted for faculty in medium and large departments.

Table 4

As Table 4 also reveals, the ANOVA for the research role resulted in a significant main effect for the Rank factor ($F = 3.01$; $df = 2,281$; $p < .05$) and for the Rank by Department Size interaction ($F = 3.23$; $df = 4,281$; $p < .05$). The means for the three rank levels (Assistant = .05; Associate = 10.7; Full = 4.13) suggest a curvilinear relationship (inverted U) opposite of that predicted in Hypothesis III, in which the assistant and full professors were predicted to deviate most from colleagial self-expectations. The associate professors are the greatest deviants, in the direction of doing less research than "expected."[1] The significant interaction is due to a divergent pattern for faculty in small departments. For faculty in medium and large departments the pattern noted in the Rank main effect is followed. However, for faculty in small departments the curvilinear relation is reversed, with the assistant and full professors doing somewhat less research than "expected" and the associatesdoing considerably more than "expected." This interaction complements the one observed for the teaching role in which the associate professors in small departments were shown to deviate strongly in the direction of spending less time on teaching than expected. Thus the increased effort expended on research by associate professors in small departments may be done at the expense of their teaching efforts.

The ANOVA conducted for the administrative role reveals no significant main or interaction effects. In summary, the three ANOVAs reveal no main

---

[1] A post-hoc comparison (Scheffé, 1959) between associates and the other two rank levels revealed a significant ($p < .05$) difference.

effect for department size, a main effect for rank in the research role only (the curvilinear relation has an inverted U form rather than the predicted U shape), and an interaction effect for both the teaching and research roles.

Prior literature on conformity to group norms would predict that low and high status individuals - here the assistant and full professors - would be the most likely deviants. Why then do we find that associate professors deviate most on the research role? As individuals one step away from the top rung of the professional ladder, namely full professorship, one would predict that associate professors might be highly sensitive to the group norm, particularly for the research role. However, associate professorship might, in a "cosmopolitan" department, be the highest status level available to faculty who do not accept the research-oriented professional model. These associate professors may be predominantly "locals."

To test for this possibility, a Chi-square test of association was computed in which the number of cosmopolitan and local faculty (as defined for the preceding analyses) were compared between the associate professors and the other two rank levels. A significant Chi-square was obtained ($X^2 = 6.58$; $df = 1$; $p < .025$), with a larger percentage of locals among the associate professors (71%) than among the other two ranks (44%). The unresponsiveness of the associate professors to colleagial research expectations may then be due to the fact that they do not have the same set of professional values as their colleagues, and consequently conform less to the research expectations.

Additional relevant data on rank differences are available in Table 5. Table 5 contains the percent of faculty who report doing more of a specific

role than "expected" by their colleagues. The percentage figures are listed separately for each role and for each rank level. Chi-square tests of association were computed comparing the three rank levels for each role behavior. The resulting Chi-squares reveal significant differences for the research ($X^2 = 33.70$; $df = 2$; $p < .01$) and administrative roles ($X^2 = 11.15$; $df = 2$; $p < .01$). For the research role, the significant difference

---

Table 5

---

is due primarily to the difference between associate professors (26%) and full professors (67%). This result reinforces the significant main effect for rank noted in the ANOVA. For the administrative role the significant X^2 appears due to the deviant pattern of assistant professors, only 35% of whom are doing more administrative work than "expected."

Perhaps the most interesting comparison in Table 5 is between the profiles for associate and full professors. Comparable percentage scores are obtained for both the teaching and administrative roles. However, the two ranks diverge radically for the research role. The associate professors appear to share comparable teaching and administrative role definitions with the full professors, but treat the research role as less central. It may be important that the associate professors do not compensate for their low research performance by assigning greater effort (than full professors) to either teaching or administration.

For the research role, then, the greatest deviants from colleagial expectations can be found among the middle-status organizational members. These may be faculty who do not consider the research role as being important, but who may be tolerated by the other faculty members because of their teaching ability or past service to the department. It may also be that

Table 4

F-Ratios of Two-Way ANOVA's Examining the Effect of Rank and Department Size on Behavioral Conformity

	df	TEACHING	RESEARCH	ADMINISTRATION
RANK (A)	(2,281)	1.91	3.01*	2.31
DEPARTMENT SIZE (B)	(2,281)	.63	1.01	1.56
A x B	(4,281)	3.14*	3.23*	1.00

*p < .05

Table 5

Direction of Behavior Deviation from Colleagial Expectations as a Function of Rank

	RANK			
	Assistant	Associate	Full	X^2
Teaching % More	56%	51%	57%	.74 df = 2
Research % More	45%	26%	67%	33.7* df = 2
Administration % More	35%	62%	58%	11.15* df = 2

*p < .01

because they do not accept the research-oriented professional model, the associate professor position may be the highest rung on the professional ladder available to them.

The rank by department size interactions for the teaching and research roles have yet to be explained. Both interaction effects are due to the unique pattern of associate professors in small departments who appear to conduct more research and less teaching than expected. The opposite is true for associate professors in medium and large departments. In small departments, then, the associate professors still deviate from colleagial norms. However, such associate professors appear to be conforming, in fact overconforming, to the research-oriented professional model. It may be that in their attempt to reach the full professorship, they are engaging in more research than "expected," at the expense of their teaching efforts. Perhaps in small departments in which the role behaviors of faculty members are more visible, there is less tolerance for the "local" oriented faculty member than in the larger departments. The larger departments, because they have a larger number of positions, might also be more willing and able to tolerate a subset of faculty who define their overall professional role differently.

In summary, the analyses in this section provide qualified support for interpreting the role episode as a social conformity process. A measure of personal orientation, namely cosmopolitan-local, appears to predict level of responsiveness to colleagial expectations. The fact that the "locals" rather than the "cosmopolitans" are the deviants does not necessarily invalidate the social conformity model; it merely reflects a different normative climate (i.e. more cosmopolitan) than originally postulated by

Gouldner (1957, 1958). The level of status does differentiate level of conformity (for research), but it is the middle-status individuals who are the greatest deviants. We have postulated here that this may be due to the middle-status positions being reserved by the organization for individuals who are deviants in the professional goals they hold, and that is is precisely because these individuals are deviants that they are held at the middle status level. Conformity to colleagial expectations does not vary across departments of different size. It may be that the size of departments used (from 10 to 123 members) is too distant from the maximally effective size of four (cf. Blake & Mouton,1961) for such conformity to operate.

(3) What are the Effects of Person-Role Conflict?

The relationships between person-role conflict (measured separately for each of the three task areas) and both satisfaction and research productivity are examined by several one-way analyses of variance. Degree of person-role conflict is operationally defined as the difference between the amount of value placed on a task by the faculty member and the percent of time he spends on the task. Three measures of satisfaction (with departmental organization, personal achievement, and personal relations) and research productivity (number of journal articles, quality of articles, and quality of article/number of authors) are treated as the dependent variables.

For all three tasks the majority of the respondents have person-role conflict scores of between +5 and -5 (Teaching: 42%; Research: 44%; Administration: 65%). That is, for almost a half of the respondents, the proportion of time they spend on the various tasks differs little, if

at all, from their own expectations. This relationship complements the results obtained earlier in the study in which self expectations for the three roles predicted significantly the amount of effort expended. This high correspondence between values and behavior may support the notion of professional autonomy, although the alternative hypotheses of dissonance reduction or of self-ascription following behavior cannot be entirely discounted.

The fact that the highest congruence between self expectations and reported behavior exists for the administrative task area is of interest. The one avtivity on which faculty place little value is the activity for which it is easiest to match behavior with expectations. It appears to be more difficult for faculty to match behavior with expectations for the two tasks which are most highly valued. Perhaps teaching and research tasks place stronger demands on a faculty member than do administrative tasks, resulting in more frequent conflict.

Table 6 contains correlation coefficients calculated between all satisfaction and research productivity measures. The empirical networks surrounding these measures prove useful in interpreting the subsequent analyses. As is evident, the three satisfaction measures, although significantly intercorrelated (average r = .53), are somewhat empirically distinct. There is redundancy in the three measures of research productivity; that is, taking account of number of authors for journal articles appears to matter little. The quality and quantity measures of research productivity are, however, somewhat distinct. The independence of the satisfaction and research productivity measures (average r = .09) is not surprising; rather it confirms

similar results in many studies of employees in industrial organizations.

Table 6

Table 7 contains the results of the one-way ANOVAs noting the effect of person-role conflict on research productivity.[1] Not included in Table 7 are the F-ratios resulting from the ANOVAs computed on the satisfaction measures. For none of the nine analyses conducted on satisfaction did the F-ratios approach significance. In subsequent analyses of faculty satisfaction, a second factor was introduced into the analyses, namely status. It was hypothesized that person-role conflict would affect satisfaction more adversely for low status faculty since the person-role conflict they are exposed to is more likely to be beyond their control. However, in the subsequent two-way ANOVAs computed, no significant interaction terms were noted. In short, Hypothesis V has not been substantiated for the satisfaction dependent variable.

Table 7

The ANOVAs for the research productivity measures (cf. Table 7) do reveal several significant differences. Although no effects of person-role conflict were noted for teaching, there is a significant difference for conflict in research on number of articles published ($F = 2.04$; $df = 4,284$; $p < .10$). An examination of the cell means reveals a U - shaped trend;

---

[1]The person-role conflict scores (ranging from -100 to +100) were categorized into five levels: 1 = -100 to -16; 2 = -15 to -6; 3 = -5 to +5; 4 = +6 to +15; 5 = +16 to +100.

Table 6

Intercorrelations Between all Pairs of Satisfaction and Research Productivity Measures

	SATISFACTION			RESEARCH PRODUCTIVITY	
	Dep't Organ	Personal Achieve	Personal Relation	# Articles	Quality Articles
SATISFACTION					
Dept. Organ					
Personal Achievement	.53**				
Personal Relations	.53**	.54**			
RESEARCH PRODUCTIVITY					
# Articles	.14*	.12*	.09		
Quality Articles	.11	.11	.03	.52**	
Quality Art./ # Authors	.07	.10	.02	.52**	.94**

Note: N = 290 for all coefficients

*p < .05
**p < .01

Table 7

Results of One-way ANOVA's Noting Relationships Between Person-Role Conflict and Research Productivity

	PERSON-ROLE CONFLICT		
	Teaching F-ratio	Research F-ratio	Administration F-ratio
RESEARCH PRODUCT.			
Number Articles	1.56	2.04*	2.93**
Quality Articles	.28	1.72	3.19**
Quality /# Authors	.30	1.25	3.47***

Note: Degrees of Freedom for all ratios = 4,284

*p < .10
**p < .025
***p < .01

faculty members experiencing person-role conflict for research (either in doing too much or too little) are more productive than those experiencing no conflict. These results are opposite of those predicted in Hypothesis V, in which individuals exposed to conflict were predicted to be less productive. The curvilinear trend was, however, not shown to be statistically significant using the post-hoc comparison method of Scheffe' (1959). Thus the results must be viewed as suggestive at best.

Table 7 also reveals significant F-ratios between person-role conflict for the administrative area and number of articles ($F = 2.93$; $df = 4,284$; $p < .025$), quality of articles ($F = 3.19$, $df = 4,284$; $p < .025$) and quality/# authors ($F = 3.47$; $df = 4,284$; $p < .01$). An examination of the means for the five levels of person-role conflict reveals a similar pattern across the three measures of research productivity (cf. Table 8). In all analyses

---

Table 8

---

the faculty members in the medium negative category (that is, those who are doing somewhat more administration than they value) are uniformly most productive. In subsequent post-hoc comparisons of faculty in group 2 with all other faculty (i.e. groups 1, 3, 4 and 5), significant differences ($p < .05$) were obtained for the quality of journals and quality/# authors measures. The results are in contrast to Hypothesis V, which predicts that the faculty experiencing no conflict would be most productive.

In sum, Hypothesis V has not been substantiated. Faculty satisfaction is constant across faculty members exposed to different levels of person-role conflict. Even if rank is taken into account, there are no differences

Table 8

Means and Standard Deviations for the Five Levels of Person-Role Conflict (Administration) and the Three Measures of Research Productivity

	Person-Role Conflict-Administration				
	1 Hi Neg	2 Med Neg	3 No Con	4 Med Pos	5 Hi Pos
Number of Articles					
Mean	4.71	11.28	4.90	4.00	8.40
St. Dev.	8.32	23.51	6.74	3.83	20.37
Quality of Articles					
Mean	140.96	300.98	162.81	143.76	90.13
St. Dev.	267.01	361.38	242.77	151.70	115.73
Quality/# Authors					
Mean	102.78	221.67	110.45	93.96	58.33
St. Dev.	226.63	303.86	168.35	110.72	76.67
N =	28 +	40 +	181 +	25 +	15 = 289

in level of satisfaction. Research productivity is not related to person-role conflict for the teaching role. It is, however, related to such conflict for the administrative and research roles with faculty members who are exposed to a moderate degree of conflict for the administrative and research roles being most productive.

Why is faculty satisfaction not significantly related to level of person-role conflict? The role theory and attitude change literatures provide an abundance of post-hoc explanations. Pondy (1967), for instance, posits five stages of the role conflict episode. We measured only the first of these stages, namely the latent conditions stage in which only certain preconditions of conflict are present. But, according to Pondy, before role conflict has any behavioral or cognitive effects, it must be perceived, and this perception must be followed by an affective response. Sampson (1963) introduces another complexity into the role-conflict model. He states that deviance from a given expectation need not result in an uncomfortable psychological state. Rather, deviance results in cognitive dissonance only if such deviation is unexpected.

Although the additional concepts introduced by Pondy and Sampson might clarify the person-role conflict satisfaction relationship, the fact still remains that faculty members who spend a considerable amount of time on activities which they do not value are as satisfied as individuals whose behaviors match perfectly their values. This may be due to the unique level of job autonomy and mobility available to faculty members, particularly those who have established a professional reputation. If such an individual moves to a university and finds the job demands inconsistent with his professional values, he has the option of finding another organization in

which his role behaviors are congruent with his values. If he does stay, and is exposed to person-role conflict, such conflict is not likely to be due to strong organizational demands, in light of his high level of autonomy. Rather, such person-role conflict may be initiated by the individual himself, who thus has no one to blame but himself. Such person-role conflict is not likely to make him less satisfied with his department, since he may realize that it is not the department which is creating his dilemma. If the person-role conflict is self-imposed, it may be accepted by the individual as a facet of the professiorial position.

What do the results for the research productivity measures mean? Apparently the most productive researchers among the faculty ranks are those who are engaged in somewhat more administrative behavior than they value. Does this mean that individuals are most productive under a moderate level of person-role conflict? The data would hardly support such an interpretation. In contrast, the more productive individuals, because they are more productive, are likely to fill more responsible positions in the department, positions which entail more administrative duties. They are also more likely to be research entrepreneurs, obtaining independent research grants which, in turn, entail more administrative work. Person-role conflict may then, be the price a faculty member must pay for success in his profession. That is, by exhibiting competence in one role, for example research, he may be allowed, and even expected to participate more in the local administrative decisions.

In short, Hypothesis V is not supported by the data examined in this section. The relationship between person-role conflict and a faculty member's psychological state (as measured by the satisfaction scale) appears to be minimal. Perhaps in organizations which exert a tight control over the

individual, and in which the individual can assign responsibility for conflict to an immediate supervisor, person-role conflict has a direct and linear effect on the individual's psychological state. But for organizations which exert only loose control, and which employ professionals with high mobility, satisfaction (particularly with the organization) is not likely to be influenced by level of person-role conflict.

Summary of Results

The results provide differential support for the five hypotheses posited. With respect to Hypothesis I, a faculty member's role set consists of his formal organization, his colleagues, and his own expectations or values. The colleagial self expectations predict the faculty member's behavior for only the teaching and research roles. Even for these two roles, the effect of colleagial expectations may be moderated by the faculty member's own expectations, particularly for the research role. In sum, Hypothesis I is supported: three of the four postulated components of the role set are significant predictors of behavior and these three, as a totality, account for an impressively large percent of the variance in the participants' role behavior.

Hypotheses II through IV suggest several moderators of conformity to colleagial values or expectations. The three hypotheses comprise a tentative test of the assumption of social influence operating within the role episode. Hypothesis II, dealing with the local-cosmopolitan dimension, was not supported for the teaching and research roles, and contradictory findings were obtained for administration. For administration, the "locals" proved to be most deviant. Contradictory results were also obtained from the tests of Hypothesis III, which dealt with effects of status. The results reveal

that associate professors (middle status level) are the greatest deviants (in the direction of doing less research than "expected"). This pattern holds only for associate professors in medium and large-sized departments. There was also no support for the contention that department size moderates the level of conformity to colleagial expectations (Hypothesis IV). The data suggest that faculty members who hold a set of professional values different from their colleagues deviate behaviorally from colleagues' norms, and thus provide partial support for the conformity interpretation.

Hypothesis V treats the effect of person-role conflict on both satisfaction and research productivity. Person-role conflict in no way predicts faculty satisfaction, even when taking into account rank level. Although such conflict (for administration) is related to all three measures of research productivity, the relationship is in a direction other than that predicted. In short, the results do not support the contention that person-role conflict has immediate and deleterious psychological effects.

IMPLICATIONS

For Role Theory

The results suggest some working hypotheses which might be of interest to role theorists and which should be tested in other organizationsl contexts:

- The expectations of an organizational unit for its employers are strong predictors of the employees' role behavior. These expectations may be conveyed through formal or structural constraints rather than through interpersonal influence.

- The importance assigned to a role mediates the impact of the role set on the employees' behavior. For roles which are viewed as unimportant (by either the employees or the organization) the employees' behavior may be influenced more by random or individual difference factors.

- The impact of an employee's colleagues on his behavior is limited by at least two constraints. The role behavior itself (or a related output) must be visible to the colleagues. Also, the employee must hold similar work-related values.

- Even for highly autonomous employees such as faculty members, the role set consists of several groups. For less autonomous employees, the number and salience of the role set components should be even greater, thus increasing the chance for role conflict.

- The most salient force in an employee's role set is his own role expectation. Whether these expectations are amenable to change by the organization is an important question yet unanswered.

- Perhaps person-role conflict has deleterious psychological effects only if the cause of such conflict is clear, lies outside of the employee, and the employee does not have the option of leaving the conflict situation.

- The direction of role conflict - that is, whether the employee is overconforming or underconforming - is an important distinction which has been ignored by role theorists. It may be that for roles which are viewed as unimportant, psychological conflict is caused by overconforming (i.e. exerting more effort than expected), whereas for roles which are viewed as important, such conflict is caused by underconforming.

For Understanding Faculty Behavior

The results also provide support for the following hypotheses concerning the functioning of faculty members at graduate-oriented universities. The hypothesized relationships are unlikely to hold up for faculty members of undergraduate-oriented or community colleges.

- The loose organizational constraints placed on a faculty member, for example requiring a minimal number of hours per week in the classroom, comprise an important force on his behavior.

- The much-discussed "colleagial influence" may operate only for the research role. Even for this role, the effect of colleagial authority is mediated by the faculty member's own values or expectations.

- The role behaviors of faculty members correspond closely to their values. This close correspondence exists for all the roles they perform within the university. This would appear to support the notion of faculty autonomy.

- The departmental executive officer, because of his divergent role definition, may lose whatever informal influence he might have had over his colleagues.

- The "local" oriented faculty members are the real departmental deviants. There appears to be a potential organizational dilemma in which faculty members who take an interest in, and become involved in, the university's functions (typically the "locals) lose influence in the department

because of such participatio.., especially if it conflicts with their research performance.

REFERENCES

Abrahamson, M. The professional in the organization. Chicago: Rand-McNally, 1967.

Allen, V.L. Situational factors in conformity. In L. Berkowitz (Ed.) Advances in experimental social psychology, Vol. 2, New York: Academic, 1965.

Anderson, G.L. The organizational character of American colleges and universities. In T.F. Lunsford (Ed.) The study of academic administration. Boulder, Colorado: Western Interstate Commission for Higher Education, 1963.

Bem, D.J. An experimental analysis of self-persuasion. Journal of Experimental Social Psychology, 1965, 1, 199-218.

Bem, D.J. Inducing belief in false confessions. Journal of Personality and Social Psychology, 1966, 3, 707-710.

Bem, D.J. Self-perception: an alternative interpretation of cognitive dissonance phenomena. Psychological Review, 1967, 74, 183-200.

Bennis, W.G., et al. Reference groups and loyalties in the out-patient department. Administrative Science Quarterly, 1958, 2, 481-500.

Berlew, D.E. & Hall, D.T. The socialization of managers: effects of expectations on performance. Administrative Science Quarterly, 1966, 11, 207-223.

Biddle, B.J. & Thomas, E.J. Role theory: concepts and research. New York: Wiley, 1966.

Blake, R.R. & Mouton, J.S. The experimental investigation of interpersonal influence. In A.D. Biderman & H. Zimmer (Eds.) The manipulation of human behavior. New York: Wiley, 1961.

Boocock, Sarane S. Toward a sociology of learning: a selective review of existing research. Sociology of Education, 1966, 39, 26 32.

Borgatta, E.F. Role-playing specification, personality, and performance. Sociometry, 1961, 24, 218-233.

Bunker, G. Self-role congruence and status congruence as interacting variables in dyadic behavior. Doctoral Dissertation, University of California, Berkeley, 1967.

Caplow, T. & McGee, R.J. The academic marketplace. New York: Basic Books, 1958.

Chaney, F.B. A cross-cultural study of industrial research performance. Journal of Applied Psychology, 1966, 50, 206-210.

Clark, B.R. Faculty organization and authority. In T.F. Lunsford (Ed.) The study of academic administration. Boulder, Colorado: Western Interstate Commission on Higher Education, 1963.

Cohen, A.M., et al. A constant variable. San Francisco: Jossey-Bass, 1971.

Collins, B.E. & Raven, B.H. Group structure: attractions, coalitions, communication, and power. In G. Lindzey and E. Aronson (Eds.) The Handbook of Social Psychology, Vol. IV, Reading, Mass.: Addison-Wesley, 1969, 102-204.

Cooley, C.H. Human nature and the social order. Boston: Scribner, 1902.

Cottrell, L.S., Jr. & Sheldon, E.B. Relationship expectations. In H.M. Vollmer & D.L. Mills (Eds.), Professionalization, Englewood Cliffs, N.J.: Prentice-Hall, 1966.

Crane, Diana. Scientists at major and minor universities: a study of productivity and recognition. American Sociological Review, 1965, 30, 699-714.

Dykes, A.R. Faculty participation in academic decision making. Washington, D.C.: American Council on Education, 1968.

Festinger, L. A theory of cognitive dissonance. Evanston: Row, Peterson, 1957.

Friedlander, F. & Margulies, N. Multiple impacts of organizational climate and individual value systems upon job satisfaction. Personnel Psychology, 1969, 22, 171-183.

Glaser, B.G. Organizational scientists: their professional careers. New York: Bobbs-Merrill, 1964.

Gouldner, A.W. Cosmopolitans and Locals: toward an analysis of latent social roles, I. Administrative Science Quarterly, 1957, 2, 281-306.

Gouldner, A.W. Cosmopolitans and locals: toward an analysis of latent social roles, II. Administrative Science Quarterly, 1958, 2, 444-480.

Gross, E. Universities as organizations: a research approach. American Sociological Review, 1968, 33, 518-544.

Gross, N.C. Mason, W.S., & McEachern, A.W. Explorations in role analysis: studies of the school superintendency. New York: Wiley, 1958.

Hanson, R.C. The systematic linkage hypothesis and role consensus patterns in hospital-community relations. American Sociological Review, 1962, 27, 304-313.

Heimberger, F. The state universities. Daedalus, 1964, 94, 1083-1108.

Hill, H.W. & French, W.L. Perceptions of the power of departmental chairmen by professors. Administrative Science Quarterly, 1967, 11, 548-574.

Hollander, E.P. Principles and methods of social psychology. New York: Oxford University Press, 1967.

Kahn, R.L., et al. Organizational stress: studies in role conflict and ambiguity. New York: Wiley, 1964.

Katz, D. & Kahn, R.L. The social psychology of organizations. New York: Wiley, 1966.

Korman, A.K. Expectancies as determinants of performance. Journal of Applied Psychology, 1971, 55, 218-222.

Levy, L.H. Conceptions of personality: theories and research. New York: Random House, 1970.

Marcson, S. The scientist in American industry. New York: Harper, 1960.

Martin, W.B. Conformity: standards and change in higher education. San Francisco: Jossey-Bass, 1969.

Mayeske, G.W. Teacher attributes and school achievement. Do teachers make a difference? Washington, D.C.: U.S. Office of Education, 1970.

Meichenbaum, D.H., Bowers, K.S., & Ross, R.R. A behavioral analysis of teacher expectancy effect. Journal of Personality and Social Psychology, 1969, 13, 306-316.

Merton, R.K. Social Theory and social structure. Glencoe: Free Press, 1957.

Merton, R.K. & Kitt, Alice S. Contributions to the theory of reference group behavior. In R.K. Merton and P.F. Lazarsfeld (Eds.) Studies on the scope and method of "The American Soldier." New York: Free Press, 1950.

Mood, A.M. Partitioning variance in multiple regression analyses as a tool for developing learning models. American Educational Research Journal, 1971, 8, 191-202.

Mukherjee, B.N. Achievement values and scientific productivity. Journal of Applied Psychology, 1968, 52, 145-147.

Newman, F., et al. Report on higher education. Washington, D.C.: U.S. Government Printing Office, 1971.

Parsons, T. Suggestions for a sociological approach to the theory of organizations, II. Administrative Science Quarterly, 1956, 1, 225-239.

Pondy, L.R. Organizational conflict: concepts and models. Administrative Science Quarterly, 1967, 12, 296-320.

Radom , M. The social scientist in American industry. Doctoral Dissertation, Columbia University, Dissertation Abstracts, 1966, 27, 866.

Raven, B.H. Social influence and power. In I.D. Steiner and M. Fishbein (Eds.) Current studies in social psychology, New York: Holt, Rinehart, and Winston, 1965, 371-382.

Rosenthal, R. & Jacobson, L. Pygmalion in the Classroom. New York: Holt, Rinehart, and Winston, 1968.

Sampson, E.E. Status congruence and cognitive consistency. Sociometry, 1963, 26, 146-152.

Sarbin, T.R. & Allen, V.L. Role theory. In G. Lindzey and E. Aronson (Eds.) The Handbook of Social Psychology, Vol. I, Reading, Mass.: Addison-Wesley, 1969, 488-567.

Scheffé, H. The analysis of variance. New York: Wiley, 1959.

Scott, W.R. Field methods in the study of organizations. In J.G. March (Ed.) Handbook of Organizations. Chicago: Rand-McNally, 1965.

Smelser, W.T. Dominance as a factor in achievement and perception in cooperative problem solving interactions. Journal of Abnormal and Social Psychology, 1961, 62, 535-542.

Udy, S.H., Jr. The comparative analysis of organizations. In J.G. March (Ed.) Handbook of Organizations. Chicago: Rand-McNally, 1965.

Vollmer, H.M. & Mills, D.L. (Eds.) Professionalization. Englewood Cliffs, N.J.: Prentice-Hall, 1966.

Wallis, W.A. Centripetal and centrifugal forces in university organization. Daedalus, 1964, 94, 1071-1082.

Wisler, C.E. On partitioning the explained variance in a regression analysis. Washington, D.C.: U.S. Office of Education, Technical Note Number 2, January, 1968.

END